

REMARKS

Claims 1-11 and 14-17 are now pending in this application. Claims 1, 2 and 4-16 are rejected. Claim 3 is objected to. Claims 12 and 13 are canceled without prejudice, waiver, or disclaimer. Claim 17 is newly added. Claims 1, 2, 4, 5, 7-10, and 14-16 have been amended. No new matter has been added.

The rejection of Claims 1, 2, 4-10 and 12-16 under 35 U.S.C. § 102(b) as being anticipated by Miyamoto et al. (U.S. Patent No. 4,672,346) is respectfully traversed.

Miyamoto et al. describe a magnetic field-adjusting mechanism characterized in that to enlarge an area of a uniform magnetic field within an air gap (4), plural magnetic field-adjusting bolts (22) made of magnetic material are provided, each of which projects from a yoke (3) and intrudes into the air gap of a magnetic circuit so that the extent of intrusion is adjustable (column 8, lines 47-54). Specifically, the magnetic field-adjusting bolts are threaded through an outer periphery of the yoke parallel with respect to opposing faces of magnetic pole segments (2) at spots corresponding to an upper, middle and lower portions of the air gap and at a spot corresponding to a gap between a permanent magnet (1) and the yoke as to intrude into the inside (column 8, lines 55-61). Shape, size, installation spot and number of the magnetic field-adjusting bolts can be selected appropriately depending upon a structure of a magnetic field-generating device, the size and magnetic characteristic of the permanent magnet, the extent of the air gap, etc. (column 9, lines 3-9).

Claim 1 recites a static magnetic field generating apparatus comprising “a pair of permanent magnets opposingly disposed across a space in which a subject is placed; a pair of base yokes for supporting said permanent magnets; and columnar yokes for magnetically connecting said base yokes and structurally supporting said base yokes, said columnar yokes having a magnetic resistance modifying device, wherein said modifying device includes a material portion including a material having a magnetic permeability different from a magnetic permeability of one of said columnar yokes, and said material portion has a cross-sectional shape identical to a cross section perpendicularly intersecting a longitudinal axis of one of said columnar yokes.”

Miyamoto et al. do not describe or suggest a static magnetic field generating apparatus as recited in Claim 1. Specifically, Miyamoto et al. do not describe or suggest columnar yokes having a magnetic resistance modifying device, where the modifying device includes a material portion including a material having a magnetic permeability different from a magnetic permeability of one of the columnar yokes, and the material portion has a cross-sectional shape identical to a cross section perpendicularly intersecting a longitudinal axis of one of the columnar yokes. Rather, Miyamoto et al. describe a yoke from which plural magnetic field-adjusting bolts project into an air gap of a magnetic circuit. Miyamoto et al. also describe that shape, size, installation spot and number of the magnetic field-adjusting bolts can be selected appropriately. Accordingly, Miyamoto et al. do not describe or suggest columnar yokes having a magnetic resistance modifying device that includes a material portion including a material having a magnetic permeability different from a magnetic permeability of one of the columnar yokes, and the material portion has a cross-sectional shape identical to a cross section perpendicularly intersecting a longitudinal axis of one of the columnar yokes. For the reasons set forth above, Claim 1 is submitted to be patentable over Miyamoto et al.

Claims 12 and 13 have been canceled. Claims 2, 4-10 and 14 depend from independent Claim 1. When the recitations of Claims 2, 4-10 and 14 are considered in combination with the recitations of Claim 1, Applicant submits that Claims 2, 4-10 and 14 likewise are patentable over Miyamoto et al.

Claim 15 recites a magnetic resonance imaging apparatus comprising “a static magnetic field generating apparatus for generating a static magnetic field using permanent magnets; a gradient magnetic field generating device for generating a gradient magnetic field; a transmitting/receiving device -for transmitting/receiving a radio frequency magnetic field in said static magnetic field; and a control section for controlling said gradient magnetic field generating device, said transmitting device and said receiving device, wherein said static magnetic field generating apparatus comprises, in columnar yokes that magnetically connect and structurally support base yokes supporting a pair of opposingly disposed said permanent magnets, a modifying device for modifying magnetic resistance of said columnar yokes, wherein said modifying device includes a material portion including a material having a magnetic

permeability different from a magnetic permeability of said columnar yoke, and said material portion has a cross-sectional shape identical to a cross section perpendicularly intersecting a longitudinal axis of said columnar yoke.”

Miyamoto et al. do not describe or suggest a magnetic resonance imaging apparatus as recited in Claim 15. Specifically, Miyamoto et al. do not describe or suggest the static magnetic field generating apparatus including, in columnar yokes, a modifying device, where the modifying device includes a material portion including a material having a magnetic permeability different from a magnetic permeability of the columnar yoke, and the material portion has a cross-sectional shape identical to a cross section perpendicularly intersecting a longitudinal axis of the columnar yoke. Rather, Miyamoto et al. describe a yoke from which plural magnetic field-adjusting bolts project into an air gap of a magnetic circuit. Miyamoto et al. also describe that shape, size, installation spot and number of the magnetic field-adjusting bolts can be selected appropriately. Accordingly, Miyamoto et al. do not describe or suggest the static magnetic field generating apparatus including, in columnar yokes, a modifying device that includes a material portion including a material having a magnetic permeability different from a magnetic permeability of the columnar yoke, and the material portion has a cross-sectional shape identical to a cross section perpendicularly intersecting a longitudinal axis of the columnar yoke. For the reasons set forth above, Claim 15 is submitted to be patentable over Miyamoto et al.

Claim 16 depends from independent Claim 15. When the recitations of Claim 16 are considered in combination with the recitations of Claim 15, Applicant submits that Claim 16 likewise is patentable over Miyamoto et al.

For at least the reasons set forth above, Applicant respectfully requests that the Section 102 rejection of Claims 1-2, 4-10, and 12-16 be withdrawn.

The rejection of Claims 11 under 35 U.S.C. § 103(a) as being unpatentable over Miyamoto et al. and further in view of Aoki et al. (U.S. Patent 6,340,888) is respectfully traversed.

Miyamoto et al. is described above. Aoki et al. describe enhancing members (22) that are attached respectively to locations farthest from a permanent magnet

(14b) in an inner surface of the connection between a plate yoke (12b) and a column yoke (18) (column 4, lines 42-46). Each of these enhancing members is fixed to the column yoke by two fixing bolts screwed from an outer surface of the column yoke (column 4, lines 58-60)

Claim 11 depends indirectly from independent Claim 1 which recites a static magnetic field generating apparatus comprising “a pair of permanent magnets opposingly disposed across a space in which a subject is placed; a pair of base yokes for supporting said permanent magnets; and columnar yokes for magnetically connecting said base yokes and structurally supporting said base yokes, said columnar yokes having a magnetic resistance modifying device, wherein said modifying device includes a material portion including a material having a magnetic permeability different from a magnetic permeability of one of said columnar yokes, and said material portion has a cross-sectional shape identical to a cross section perpendicularly intersecting a longitudinal axis of one of said columnar yokes.”

Neither Miyamoto et al. nor Aoki et al., considered alone or in combination, describe or suggest a static magnetic field generating apparatus as recited in Claim 1. Specifically, neither Miyamoto et al. nor Aoki et al., considered alone or in combination, describe or suggest columnar yokes having a magnetic resistance modifying device, where the modifying device includes a material portion including a material having a magnetic permeability different from a magnetic permeability of one of the columnar yokes, and the material portion has a cross-sectional shape identical to a cross section perpendicularly intersecting a longitudinal axis of one of the columnar yokes. Rather, Miyamoto et al. describe a yoke from which plural magnetic field-adjusting bolts project into an air gap of a magnetic circuit. Miyamoto et al. also describe that shape, size, installation spot and number of the magnetic field-adjusting bolts can be selected appropriately. Aoki et al. describe a column yoke to which enhancing members are fixed by two fixing bolts screwed from an outer surface of the column yoke. Accordingly, neither Miyamoto et al. nor Aoki et al., considered alone or in combination, describe or suggest columnar yokes having a magnetic resistance modifying device that includes a material portion including a material having a magnetic permeability different from a magnetic permeability of one of the columnar yokes, and the material portion has a cross-sectional shape

identical to a cross section perpendicularly intersecting a longitudinal axis of one of the columnar yokes. For the reasons set forth above, Claim 1 is submitted to be patentable over Miyamoto et al. in view of Aoki et al.

When the recitations of Claim 11 are considered in combination with the recitations of Claim 1, Applicant submits that dependent Claim 11 likewise is patentable over Miyamoto et al. in view of Aoki et al.

For at least the reasons set forth above, Applicant respectfully requests that the Section 103 rejection of Claim 11 be withdrawn.

Moreover, Applicant respectfully submits that the Section 103 rejections of Claim 11 is not a proper rejection. As is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. Neither Miyamoto et al. nor Aoki et al., considered alone or in combination, describe or suggest the claimed combination. Furthermore, in contrast to the assertion within the Office Action, Applicant respectfully submits that it would not be obvious to one skilled in the art to combine Miyamoto et al. with Aoki et al. because there is no motivation to combine the references suggested in the cited art itself.

As the Federal Circuit has recognized, obviousness is not established merely by combining references having different individual elements of pending claims. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP 2143.01. Rather, there must be some suggestion, outside of Applicant's disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicant's disclosure. In re Vaeck, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither a suggestion or motivation to combine the prior art disclosures, nor any reasonable expectation of success has been shown.

Furthermore, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the cited art so that the claimed invention is rendered obvious. Specifically, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the art to deprecate

the claimed invention. Further, it is impermissible to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. The present Section 103 rejection is based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Specifically, Miyamoto et al. teach a yoke from which plural magnetic field-adjusting bolts project into an air gap of a magnetic circuit. Miyamoto et al. also teach that shape, size, installation spot and number of the magnetic field-adjusting bolts can be selected appropriately. Aoki et al. teach a column yoke to which enhancing members are fixed by two fixing bolts screwed from an outer surface of the column yoke. Since there is no teaching nor suggestion in the cited art for the combination, the Section 103 rejection appears to be based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicant requests that the Section 103 rejections of Claim 11 be withdrawn.

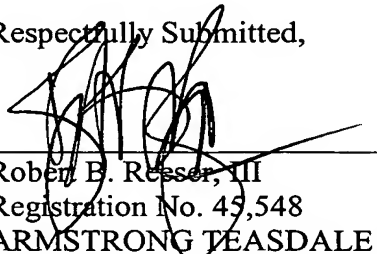
For at least the reasons set forth above, Applicant respectfully requests that the rejections of Claim 11 under 35 U.S.C. 103(a) be withdrawn.

Claims 3 has been indicated to contain allowable subject matter if rewritten to include all of the limitations of the base claims and any intervening claims. Applicant thanks the Examiner for the indication of allowable subject matter in Claim 3.

Newly added Claim 17 recites a static magnetic field generating apparatus. None of the art cited in the Office Action, considered alone or in combination, describe or suggest a static magnetic field generating apparatus as recited in Claim 17. Accordingly, Applicant respectfully submits that Claim 17 is patentable over the cited art.

In view of the foregoing amendment and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'R. B. Resser, III', is written over a horizontal line.

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